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ABSTRACT

Two groups of continuing education students were tested using three of Viktor Lowenfeld's tests of visual-haptic perception. The scores from the three tests were added to yield a score which identified an individual's location on Lowenfeld's visual-haptic continuum. The investigation also uncovered scoring problems with two of the tests which had not been previously reported in the literature. It was concluded that the Picture a Building Test as well as the Test of Visual and Haptical Word Association should not be used in their original form as a vehicle for ascertaining an individual's perceptual aptitude. Raw data tables are included. (Author)

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Viktor Lowenfeld's Visual-Haptic Continuum and Groups of Wide Geographic Separation

by

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Introduction

Lowenfeld (1939) clinically identified two types of perceptual aptitudes, and later (1945) developed a series ot tests which would differentiate between these perceptual aptitudes. Lowenfeld named his perceptive types, the visual and the haptic. In testing, Lowenfeld (1945) found that the extreme haptic individual and the extreme visual individual occupied the antipodes of a continuum.

The visual individual is an observer. He views his environment objectively. When confronted with a scene, the visual individual is able to obtain an overview without first being lost in the scene's details. He is then able to divide the scene into its' component parts followed by the synthesis of a new whole. When confronted with kinesthetic tactile experiences, he is able easily to convert these into visual images. People of the visual perceptive aptitude use their eyes as the main avenue of information acquisition. Information acquired via the visual channel is stored and when needed, is reproduced with a great degree of accuracy.

On the other hand, the haptic, while of normal visual acquity, uses his eyes only when forced to do so. This person enters into a personal relationship with his environment, viewing it subjectively. He is the center of his environment. When viewing scenery, the haptic individual is quickly lost in the minute details without being able to see the scene's outline. Haptics are content with their kinesthetic tactile

impressions and do not form visual images of them. The drawings of one with this perceptual aptitude are abstract rather than realistic.

Using his series of tests, Lowenfeld (1945) found 47 percent of his 1147 responses to be visual while 23 percent were clearly haptic. The remaining 30 percent received a score such that they could not be clearly identified as being either visual or haptic. Since that time, some or all of the tests used by Lowenfeld have been used by Wiggin (1953), Flick (1960), Erickson (1963), Franchak (1971), and Schlenker (1976).

Purpose

There were two primary purposes in the conduct of this study. The first and paramount purpose was to attempt to duplicate Lowenfeld's (1945) percentages. Second was an interest in ascertaining whether there was a statistically significant difference between the way individuals in two widely seperated geographical areas responded to the test instruments.

Instruments

Three instruments were used in this study. They were; Test of Subjective Impressions, Picture a Building Test, and Test of Visual vs Haptical Word Association, Lowenfeld (1945).

Sample

The sample consisted of two groups. Both groups were composed of adults and all subjects in both groups were enrolled in continuing education evening courses. One group was tested in Orono, Maine while the other was tested in Chicago, Illinois. The Maine sample included 40 members and the Illinois sample, 73.

Procedure

The tests were administered exactly as Lowenfeld had originally administered them in 1945 except that with neither group was the investigator the test administerer.

Scoring

The tests were scored in a manner similar to that of Lowenfeld (1945). One point was allowed on the Test of Visual vs Haptical Word Association, for each visual response. On the remaining tests, ten points were awarded for a visual response, five points for an intermediate response and zero points for a haptic response. Theoretically, the possible test range was 0-40. The scores from the three tests were added to obtain a total score. The total score represented the relative position one occupied on the visual-haptic continuum. Each subject was given a letter designation, V = visual, I = intermediate, H = haptic

depending upon his responses. Percentages were also computed.

Results

The data obtained from both groups are presented in tables 1-6. Tables 1 and 2 provide raw data information for the Maine and Chicago groups respectively. Column #4 in many cases carries an asterisk. The asterisk reflects the respondents failure to provide 20 responses to test three. The test three column also includes the number of visual and the number of haptic responses. Visual responses are listed to the left of the type initial while haptic responses are to the right.

The cells V1...H3 of tables 3 and 5 provide the number of individuals classified in each type category for each test. Column T reflects the total number of individuals categorized in the three areas for all of the tests.

Cells V1...H3 of tables 4 and 6 provide percentage information in the same manner as tables 3 and 5 provided numerical information.

Table 1

Maine Group Raw Data

Case Number	Test Number 1	2	3	Total Score
1	V	H	15 V 5	25
2	V	V	15 V 5	35
3	H	I	10 I 10	15
4	V	I	9 H 10	24*
5	I	I	9 I 11	19
6	V	I	15 V 4	30*
7	H	V	8 I 11	18*
8	H	V	11 I 9	21

Table 1 Continued

9	V	V	14 V 5	34*
10	V	I	9 I 11	24
11	V	H	18 V 2	28
12	V	I	5 H 15	20
13	V	I	2 H 16	17*
14	V	I	8 H 12	23
15	V	V	6 H 14	26
16	V	I	8 H 12	23
17	V	V	6 H 13	26*
18	V	V	10 I 9	30*
19	V	V	12 V 8	32
20	V	H	14 V 6	24
21	V	V	8 H 12	28
22	H	I	4 H 13	9*
23	V	I	16 V 4	31
24	H	H	2 H 15	2*
25	V	V	7 H 13	27
26	V	I	9 I 6	24*
27	V	V	3 H 17	23
28	H	V	11 I 9	21
29	V	V	18 V 2	38
30	H	H	6 H 12	6*
31	H	H	13 V 5	13*
32	V	I	3 H 17	18
33	I	V	7 H 13	22
34	I	I	H 20	10
35	V	I	10 I 10	25
36	V	I	15 V 4	30*
37	V	V	9 I 11	29
38	V	I	H 19	15*
39	V	H	8 I 11	18*
40	V	V	H 20	20

Table 2

Chicago Group Raw Data

Case Number	Test Number 1	2	3	Total Score
1	H	I	10 I 3	15*
2	H	H	3 I 8	3*
3	I	H	12 V 8	12*
4	H	H	15 V 5	15
5	H	H	2 H 16	2*
6	V	I	6 H 14	21
7	V	V	6 H 14	26

Table 2 Continued

8	V	V	6 I 8	26*
9	V	V	4 H 15	24*
10	V	I	1 H 19	16
11	V	V	7 H 12	27*
12	V	I	2 H 18	17
13	V	H	10 I 10	20
14	V	V	13 V 5	33*
15	V	I	8 H 12	23
16	V	V	11 I 9	31
17	V	I	5 I 3	20*
18	V	I	7 H 13	22
19	V	H	I 2	10*
20	V	I	14 V 6	29
21	V	I	3 H 12	18*
22	V	I	2 H 18	17
23	V	V	3 H 17	23
24	V	V	10 I 6	30*
25	V	I	1 H 19	16
26	V	I	14 V 6	29
27	V	V	12 V 5	32*
28	V	I	14 V 5	29*
29	V	H	12 V 8	22
30	V	I	16 V	31*
31	V	I	9 I 11	24
32	V	V	4 H 16	24
33	V	H	10 I 8	20*
34	H	V	I [illegible]	10*
35	V	I	14 V 6	29
36	V	I	4 I 7	19*
37	V	V	4 H 16	24
38	V	V	9 I 10	29*
39	V	I	7 H 13	22
40	V	V	7 I 10	27*
41	V	I	3 H 13	18*
42	V	V	6 I 4	26*
43	V	V	2 H 16	22*
44	V	I	11 H 7	26*
45	V	I	1 H 13	16*
46	V	V	9 I 10	29*
47	V	V	8 I 9	28*
48	V	I	8 H 12	23
49	V	V	9 I 11	29
50	V	I	7 I 9	22*
51	V	V	16 V 4	36
52	V	V	5 H 15	25
53	H	I	13 V 4	18*
54	V	I	14 H 6	29
55	V	V	7 H 13	27
56	V	I	7 I 8	22*
57	V	V	6 H 14	26
58	H	V	6 H 14	16
59	V	V	4 H 16	24*

Table 2 Continued

60	V	I	13 V 4	28*
61	V	I	5 H 12	20*
62	V	V	16 V 4	36
63	I	I	2 H 18	12
64	V	I	3 H 17	18
65	V	V	10 I 10	30
66	I	I	H 5	5*
67	I	I	2 H 14	7*
68	V	I	4 H 15	19*
69	I	I	6 H 14	16
70	V	I	10 I 10	25
71	V	I	16 V 4	31
72	H	H	4 H 14	4*
73	V	I	3 H 15	18*

Table 3

Numerical Tabulation of the Maine Group
N = 40, range of scores 2-38

	1	2	3	T
V	29	16	11	56
I	3	17	12	32
H	8	7	17	32

Table 4

Percentages of the Maine Group N = 40

	1	2	3	T
V	72.5	40.0	27.5	46.9
I	7.5	42.5	30.0	26.9
H	20.0	17.5	42.5	26.9

Table 5

Numerical Tabulation of the Chicago Group
N = 73, range 2-36

	1	2	3	T
V	60	27	16	103
I	5	37	64	64
H	8	9	34	52

Table 6

Percentages of the Chicago Group N = 73

	1	2	3	T
V	82.3	36.9	21.9	47.1
I	6.8	50.7	28.7	28.7
H	10.9	12.5	49.3	24.2

Discussion

The evaluation of tests 2 and 3 uncovered two problems. With test 2 many respondents indicated that they were sure of the number of floors in the building. When responding to the question concerning the reasons why they had this knowledge, they indicated that they viewed the building from the outside and also counted the floors singly. Some of the respondents indicated that they were not sure of the number of floors and so counted the floors singly and viewed the building from the exterior.

Lowenfeld (1945) instructed respondents to test 3. Test

of Visual vs Haptical Word Association, not to respond to a gerund if a word or thought did not immediately come to mind. The raw data tables, 1 and 2, show that 54 of the 113 respondents failed to provide 20 responses on this test. Additionally, many of the respondents provided noun responses to some of the gerunds, rather than noun responses. Both of these events created scoring problems. When classifying an individual under one type category or another, the evaluator is forced to question how a score would have looked had the maximum number of responses been provided. For example, if an individual provided 7 visual and 6 haptic responses, how should he be classified? We might assume that this person attends to this test as an intermediate, but is it reasonable to assume that this pattern would have continued if the total possible number of responses had been provided? Some of the gerund responses to gerunds were clearly haptic, some appeared to be visual and the classification of some was questionable. How should these responses have been evaluated? Although not specifically mentioned in his earlier work, Schlenker (1976) experienced similar evaluation problems in that study.

Flick and Wiggin (personal correspondence) stated that a gerund response to a gerund could be classified in only one way. A gerund response had to be a haptic response since it placed the individual in a subjective relationship with his environment.

Flick (personal correspondence) stated that he and Lowenfeld had discussed these problems at some length. Flick suggested that; (1) there were problems in the evaluation of the Picture a Building Test and for this reason it should not be used as a method of ascertaining one's visual-haptic tendencies, (2) the Test of Visual vs Haptical Word Association should not be administered to subjects in the written form. According to Flick, a more reasonable form is to prerecord the gerunds with a specified amount of time between each successive gerund; five seconds was suggested as being reasonable.

The data listed in the columns titled, total, in tables 1 and 2 agrees with Lowenfeld (1939, 1945). A given group will plot between the antipodes of the visual-haptic continuum. Also, there are few subjects who fall near the antipodes of the continuum.

Conclusions

The original intention of this study was to compare two groups of wide geographical seperation. The goal was to see how these groups related to one another and whether Lowenfeld's (1945) percentages could be duplicated. Based upon conversations with Flick and Wiggin, it seems reasonable to conclude that;

1. These groups cannot be comapred based upon the scores of these tests.

2. The Picture a Building Test is not a reasonable method of ascertaining an individuals visual-haptic tendencies.
3. The Test of Visual vs Haptical Word Association, administered following Lowenfeld's (1945) directions is not a reasonable method of ascertaining an individuals visual-haptic tendencies.
4. While individuals did exist in a continuum, based on the total scores of these tests, the mean score of the continuum would shift if other instruments had been used.

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Appendix

TESTS FOR VISUAL AND HAPTICAL APTITUDES

Student or Social Security Number_____

The following are a group of psychological tests designed to identify individuals as being either of the visual or haptic perceptive type or an intermediate. There are no correct or incorrect answers to these items, there are only your answers.

1. TEST OF SUBJECTIVE IMPRESSIONS

This is a drawing test, remember that it is also a psychological test and that it does not depend on your ability to draw. The most primitive drawing will give the same insight as the most perfect. Just draw as you would have if no one had asked you to draw. In the space below:

Draw: A table with a glass on top.

Draw: A table with a chess-board on top.

2. TEST OF SUBJECTIVE IMPRESSIONS

Think of a very familiar building (house of a friend, court house, town hall, dormitory), a building which you know from outside and inside, which is neither your home nor your school nor office building.

A. How many floors has the building?_____

B. Were you (1) sure; (2) not quite sure; (3) unsure of the given number?

C. When you thought of the number of floors, did you think of

(1) how many floors you have to climb?

(2) did you count the floors singly?

(3) did you think of the whole building as it appears from the outside?

3. TEST OF VISUAL VS. HAPTICAL WORD ASSOCIATION

Write down your immediate reaction after reading each single word; if nothing comes to mind, leave the space blank.

greeting_____ pulling_____

walking_____ swimming_____

looking_____ riding_____

climbing_____ running_____

talking_____ jumping_____

lifting_____ listening_____

thinking_____ reaching_____

drawing_____ touching_____

catching_____ stretching_____

hearing_____ breathing_____

Scoring

Tests 1 and 2 were scored in the same manner, as follows; if the test identified an individual as being haptic, no points were allowed, an intermediate received 5 points and a visual received 10 points. With test 3, one point was allowed for each visual response. The lowest possible score a person could receive on test 3 was 0, while the highest possible score was 20. On test 3, an individual had to accumulate at least 12 points to be identified as a visual; scores of 11, 10, and 9 fell into the intermediate category and 8 or fewer points identified an individual as being haptic. A tabular account of the scoring is found in the table below.

	1	2	3
V	10	10	12-20
I	5	5	9-11
H	0	0	0-8

If an individual had a perfect visual score he would accumulate a total of 40 points. The total number of points an individual received, determined his relative position on the visual-haptic continuum.